



UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/767,413 01/23/01 CASSEL

TM02/0614

JOHN D. GUGLIOTTA, P.E., ESQ.
202 DELAWARE BUILDING
137 SOUTH MAIN STREET
AKRON OH 44308

C 887
EXAMINER

ART UNIT, T	PAPER NUMBER
-------------	--------------

DATE MAILED:

06/14/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/767,413

Applicant(s)
Cassel et al.

Examiner
Toan Pham

Art Unit
2632



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Apr 16, 2001
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☒ The proposed drawing correction filed on Apr 16, 2001 is: a) ☒ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

Art Unit: 2632

DETAILED ACTION

Drawings

1. The corrected or substitute drawings were received on April 16, 2001. These drawings are approved.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Dwyer (5,928,157).

Regarding claim 1: O'Dwyer discloses a combination breathing monitor alarm and audio baby alarm comprising an attachable transmitter (105) forming a main body of a linearly elongated, pliable chest strap of formable material that is easily wrapable about the chest of an infant; and a receiver (111, 115, 119) housing receiver control circuitry for receiving signals transmitted by said transmitter (105) (col. 4, lines 6-23; col. 7, lines 42-55). O'Dwyer does not disclose the strap being soft; however, such material of the strap is merely a matter of design

Art Unit: 2632

choice and substituting different material for another by one of ordinary skill in the art is anticipated and would not depart from the scope and spirit of the invention.

Regarding claim 2: O'Dwyer discloses the transmitter further comprises a hook (45) and loop fastener (43) means to allow for the chest strap to be connected in a manner circumscribing the wearer's chest (col. 7, lines 42-55; Figs. 2-9).

Regarding claim 4: O'Dwyer discloses the receiver (111, 115, 119) is in wireless radio communication with said transmitter (105) (col. 4, lines 19-23; Figs. 2-9).

4. Claims 3 and 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Dwyer (5,928,157) in view of Teodorescu et al. (6,011,477).

Regarding claim 3: O'Dwyer does not disclose the sensors including a first and second resonant sensor and including a microphone housed with the chest strap. Teodorescu et al. discloses a respiration and movement monitoring system including a resonant sensor (50) and may be used interchangeably with first sensor (12) and second sensor (18) to monitored the respiration and movements of an infant (14) (col. 3, lines 55-61; col. 4, lines 34-54). Teodorescu et al. also discloses an audio detector unit (24) detects, filters, and amplifies audio signals produced proximal to support platform (16) by, for example, a voice or sounds associated with an infant (14) (col. 4, lines 8-11). Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilized resonant sensors to monitored the respiration and movement activities of the infant as taught by Teodorescu et al. in a system

Art Unit: 2632

disclosed by O'Dwyer for providing a fail-safe monitoring system that is responsive to the lack of resonant frequency being generated by the respiration movement of the infant or detachment of the straps from the infant.

Regarding claim 6: O'Dwyer discloses the transmitter unit (105) for communicating the alarm signal with the receiver (111, 115, 119). O'Dwyer does not disclose the antenna associated with the transmitter unit; however, transmitter and receiver including antennas for communication are well known in the art of wireless communication. Teodorescu et al. discloses the transmitter circuitry has a transmitter controller (26) communicating with an antenna and an audio detector unit (24) inherent of a microphone for communicating the alarm signal to the remote station (30).

Regarding claim 7: O'Dwyer discloses the radio frequency receiver (111, 115, 119) communicating with the transmitter (105) for activating the alarm signal through the speaker (60) (col. 8, lines 31-14). O'Dwyer does not disclose the digital-to-analog speaker amplification circuit; however, it is well known that the transmitted signals are digital and it is being received as a digital signal until it is converted back to an analog signal and amplified and output to the speaker.

Regarding claim 8: O'Dwyer discloses the respiration monitor for monitoring the respiration of the user as well as interacting with the transmitter control for transmitting a respiration alarm signal (col. 4, lines 15-23).

Art Unit: 2632

Regarding claim 9: Teodorescu et al. discloses the respiration monitor includes a first (12) and second (14) sensor and a resonant sensor (50) may be used interchangeably with the first and second sensor to monitor the respiration and movement of the infant (col. 3, lines 55-61; col. 4, lines 34-54).

Regarding claim 10: O'Dwyer discloses the respiration monitor comprises a comparator (103) that compares the respiration related signal patterns to a stored pattern, and monitors the heart rate or pulse as compared with an initial baseline measurement (col. 4, lines 6-31).

Regarding claim 11: O'Dwyer discloses the respiration monitor comprises a comparator (103) circuit that determines if either of the measured characteristic falls below an alarm point, and generates an alarm output impulse that communicates with the radio frequency transmitter (105), forming a synthesized signal that communicating with an antenna as is well known in the art with wireless communication and results in an alarm of a predetermined frequency for audible transmission through the speaker (60) of the receiver (58, 111, 115, 119) (col. 4, lines 6-31).

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Dwyer (5,928,157) in view of Tao (4,862,144). O'Dwyer does not disclose a receiver comprises a light means. Tao discloses a receiver comprises a light means (42) for providing a visible alarm notification (col. 7, lines 34-36). Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilized a light means in the receiver as taught by

Art Unit: 2632

Tao in a system as disclosed by O'Dwyer for providing a visible alarm indication and alerting the care taker of an alarm condition.

Response to Arguments

6. Applicant's arguments filed on April 16, 2001 have been fully considered but they are not persuasive. Because,

Applicant's Arguments:

There is no suggestion as to the desirability of any modification of the references to describe the present invention. An analysis of the disclosures within the cited references fails to cite every element of the claimed invention, including (but not limited to)

- A) a combination of transmitter and receiver;
- B) a chest strap supporting a first resonant sensor spaced laterally apart from a second resonant sensor;
- C) a microphone housed with said chest strap which communicates with transmitter control circuitry housed therein;
- D) a light means housed within the receiver;
- E) an analog to digital microphone amplification circuit in communication with a microphone;
- F) a conventional radio frequency receiver communicating with an antenna and controlled by a digital to analog speaker amplification circuit in communication with a speaker;

Art Unit: 2632

- G) a respiration monitor for monitoring the respiration of the user as well as interacting with the transmitter control circuitry for transmitting a respiration alarm signal within the monitor;
- H) a first resonant sensor for detecting respiration and movement of the infant a second resonant sensor for detecting heart rate and pulse;
- I) a signal processor that compares the respiration related signal pattern to a stored pattern, and monitors the heart rate or pulse as compared with an initial baseline measurement;
- J) a comparator circuit that determines if either of the measured characteristics fall below an alarm point, and generate an alarm output impulse that communicates with the radio frequency transmitter, forming a synthesized signal that communicating with an antenna and results in an alarm or annunciation signal of a predetermined frequency for audible transmission through said speaker of said receiver.

Response to Arguments:

- A) O'Dwyer discloses a combination breathing monitor alarm and audio baby alarm comprising an attachable transmitter (105) forming a main body of a linearly elongated, pliable chest strap of formable material that is easily wrapable about the chest of an infant; and a receiver (111, 115, 119) (see Fig. 2).
- B) O'Dwyer does not disclose the sensors including a first and second resonant sensor and including a microphone housed with the chest strap. Teodorescu et al. discloses a respiration and movement monitoring system including a resonant sensor (50) and may be used interchangeably with first sensor (12) and second sensor (18) to monitor the respiration and movements of an

Art Unit: 2632

infant (14) (col. 3, lines 55-61; col. 4, lines 34-54). Therefore, it would have been obvious to utilize a resonant sensor as taught by Teodorescu et al. to monitor the movement of an infant.

C) O'Dwyer does not disclose the sensors including a first and second resonant sensor and including a microphone housed with the chest strap. Teodorescu et al. discloses a respiration and movement monitoring system including a resonant sensor (50) and may be used interchangeably with first sensor (12) and second sensor (18) to monitored the respiration and movements of an infant (14) (col. 3, lines 55-61; col. 4, lines 34-54). Teodorescu et al. also discloses an audio detector unit (24) detects, filters, and amplifies audio signals produced proximal to support platform (16) by, for example, a voice or sounds associated with an infant (14) (col. 4, lines 8-11). Thus, an audio detector is indicative of a microphone.

D) O'Dwyer does not disclose a receiver comprises a light means. Tao discloses a receiver comprises a light means (42) for providing a visible alarm notification (col. 7, lines 34-36). Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to utilized a light means in the receiver as taught by Tao in a system as disclosed by O'Dwyer for providing a visible alarm indication and alerting the care taker of an alarm condition.

E & F) O'Dwyer discloses the radio frequency receiver (111, 115, 119) communicating with the transmitter (105) for activating the alarm signal through the speaker (60) (col. 8, lines 31-14). O'Dwyer does not disclose the digital-to-analog speaker amplification circuit; however,

Art Unit: 2632

it is well known that the transmitted signals are digital and it is being received as a digital signal until it is converted back to an analog signal and amplified and output to the speaker.

G & J) O'Dwyer discloses the respiration monitor comprises a comparator (103) circuit that determines if either of the measured characteristic falls below an alarm point, and generates an alarm output impulse that communicates with the radio frequency transmitter (105), forming a synthesized signal that communicating with an antenna as is well known in the art with wireless communication and results in an alarm of a predetermined frequency for audible transmission through the speaker (60) of the receiver (58, 111, 115, 119) (col. 4, lines 6-31).

H) Teodorescu et al. discloses the respiration monitor includes a first (12) and second (14) sensor and a resonant sensor (50) may be used interchangeably with the first and second sensor to monitor the respiration and movement of the infant (col. 3, lines 55-61; col. 4, lines 34-54).

I) O'Dwyer discloses the respiration monitor comprises a comparator (103) that compares the respiration related signal patterns to a stored pattern, and monitors the heart rate or pulse as compared with an initial baseline measurement (col. 4, lines 6-31).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

Art Unit: 2632

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communications intended for entry)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

9. Any inquiry concerning this communication should be directed to Examiner Toan Pham at telephone number (703) 306-3038. The examiner can normally be reached on Monday-Friday, 7:00am-5:00pm.

If attempt to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Jeffery Hofsass, can be reached on (703) 305-4717.

Application/Control Number: 09/767,413

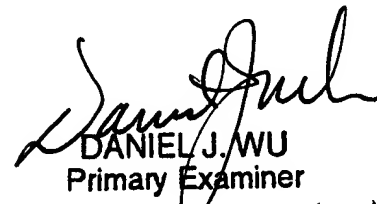
Page 11

Art Unit: 2632

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700, Mon-Fri, 8:30am-5:00pm.

Examiner: Toan Pham

Date: June 13, 2001


DANIEL J. WU
Primary Examiner
06/13/01